

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference D 2398 PCT	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/EP 00/05922	International filing date (day/month/year) 26/06/2000	(Earliest) Priority Date (day/month/year) 25/06/1999
Applicant UNIVERSITÄT ZÜRICH et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 6 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☒ furnished subsequently to this Authority in written form.

☒ furnished subsequently to this Authority in computer readable form.

☒ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☒ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☒ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

HETERO-ASSOCIATING COILED-COIL PEPTIDES AND SCREENING METHOD THEREFOR

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☒ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

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☐ None of the figures.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Present claim 8, and claims 10-13 and 15-22 in as far as they pertain to claim 8, relate to a polypeptide defined by reference to a desirable characteristic or property, namely that it can be obtained by the method of claim 7.

The claims cover all polypeptides having this characteristic or property, whereas the application provides support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT for only a very limited number of such polypeptides. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claims also lack clarity (Article 6 PCT). An attempt is made to define the product by reference to a result to be achieved. Again, this lack of clarity in the present case is such as to render a meaningful search over the whole of the claimed scope impossible. Consequently, the search has been carried out for those parts of the claims which appear to be clear, supported and disclosed, namely those parts relating to the polypeptides comprising domains as defined in claims 5 and/or 6, and in the broader sense those that fall under the general formulae of claim 1(a) and (b).

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/ 00/05922

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/10 G01N33/68 C07K14/00 A61K38/17

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N G01N C07K A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 98 34120 A (PELLETIER JOELLE NINA ; REMY INGRID (CA); UNIV MONTREAL (CA); MICHN) 6 August 1998 (1998-08-06) cited in the application the whole document	1-22
Y	YU Y ET AL: "INVESTIGATION OF ELECTROSTATIC INTERACTIONS IN TWO-STRANDED COILED-COILS THROUGH RESIDUE SHUFFLING" BIOPHYSICAL CHEMISTRY, AMSTERDAM, NL, vol. 59, 16 April 1996 (1996-04-16), pages 299-314, XP000971324 cited in the application the whole document	1-22

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *8* document member of the same patent family

Date of the actual completion of the international search

4 January 2001

Date of mailing of the international search report

18/01/2001

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Smalt, R

INTERNATIONAL SEARCH REPORT

International Application No

PCT/ 00/05922

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>ARNDT K M ET AL: "In-vivo selection of interacting peptide libraries by selectively-infective phages." FASEB JOURNAL, vol. 11, no. 9, 1997, page A1327 XP002156485 17th International Congress of Biochemistry and Molecular Biology in conjunction with the Annual Meeting of the American Society for Biochemistry and Molecular Biology; San Francisco, California, USA; August 24-29, 1997 ISSN: 0892-6638 the whole document ---</p>	
A	<p>O'SHEA E K ET AL: "PEPTIDE 'VELCRO*': DESIGN OF A HETERODIMERIC COILED COIL" CURRENT BIOLOGY, GB, CURRENT SCIENCE,, vol. 3, no. 10, 1993, pages 658-667; XP000653001 ISSN: 0960-9822 cited in the application the whole document ---</p>	
A	<p>HODGES R S: "DE NOVO DESIGN OF ALPHA-HELICAL PROTEINS: BASIC RESEARCH TO MEDICAL APPLICATIONS" BIOCHEMISTRY AND CELL BIOLOGY. BIOCHIMIE ET BIOLOGIE CELLULAIRE, XX, XX, vol. 74, no. 2, 1996, pages 133-154, XP000605834 ISSN: 0829-8211 cited in the application the whole document ---</p>	
A	<p>JOHN MATTHIAS ET AL: "Two pairs of oppositely charged amino acids from Jun and Fos confer heterodimerization to GCN4 leucine zipper." JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 269, no. 23, 1994, pages 16247-16253, XP002156486 ISSN: 0021-9258 cited in the application the whole document ---</p>	
A	<p>O'SHEA E K ET AL: "MECHANISM OF SPECIFICITY IN THE FOS-JUN ONCOPROTEIN HETERODIMER" CELL, vol. 68, no. 4, 1992, pages 699-708, XP002156487 ISSN: 0092-8674 cited in the application the whole document ---</p>	

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/00/05922

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	PELLETIER, J.N. ET AL.: "An in vivo library-versus-library selection of optimized protein-protein interactions." NATURE BIOTECHNOLOGY, vol. 17, July 1999 (1999-07), pages 683-90, XP002156488 the whole document	1-19,22
P,X	ARNDT KATJA M ET AL: "A heterodimeric coiled-coil peptide pair selected in vivo from a designed library-versus-library ensemble." JOURNAL OF MOLECULAR BIOLOGY, vol. 295, no. 3, 21 January 2000 (2000-01-21), pages 627-639, XP002156489 ISSN: 0022-2836 the whole document	1-19,22

INTERNATIONAL SEARCH REPORT

Informa

patent family members

International Application No

PCT/00/05922

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9834120 A	06-08-1998	CA 2196496 A AU 5850598 A EP 0966685 A	31-07-1998 25-08-1998 29-12-1999